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EXAMINER

SHAFFER, ERIC T

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/594,652

Applicant(s)

IYER ET AL.

Examiner

Eric T. Shaffer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 - 48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 - 11, 13 - 25, 27 - 40 and 42 - 48 is/are rejected.
- 7) ☒ Claim(s) 12, 26 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to the amendments filed December 12, 2003.

Summary Of Instant Office Action

2. Applicant's arguments, filed December 12, 2003, concerning claims 1 – 5 and 7- 48 in the Office Action mailed April 13, 2003, have been considered and deemed unpersuasive in view of newly cited art.
3. Claim 6 has been cancelled by the applicant and the applicant has added no new claims. Claims 1 – 5 and 7 – 48 are pending and are prosecuted in the response set out below.

Allowable Subject Matter

4. Claims 12, 26 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 5 and 7 – 11, 13 – 25, 27 – 40 and 42 - 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Linden et al. (US 6,266,649) in view of Breese et al (US 6,018,738).

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7. As per Claims 1, 5 and 33 Linden et al teaches an automated collaborative filter based recommendation system, method and software for comparing attributes and mapping item to item similarities, where the system recommends one or more alternative products similar to a requested product, comprising:

a first user interface operable to receive a user request for a product having one or more product attributes, the user request specifying a desired attribute value for each of one or more selected product attributes is anticipated by Linden et al., which teaches “a Web server application which processes HTTP (Hypertext Transfer Protocol) requests received over the Internet from user computers” (column 7, lines 10 - 12);

receiving a user request for a product is anticipated by Linden et al., which teaches “this enables the personal recommendations to be generated rapidly and efficiently, such as in real-time in response to a request by the user” (column 3, lines 34 - 36);

a search procedure operable to select a set of one or more candidate alternative products (“a search engine and associated database for enabling users to interactively search the catalog”, column 7, lines 41 - 44) having attribute values consistent with the desired attribute values specified in the user request (“process is preferably invoked in real-time in response to an online action of the user”, column 10, lines 13 - 14) for the selected product attributes, for each potential alternative product in a set of potential alternative products the search procedure operable to:

for each selected product attribute (“designated product group e.g. books, or category e.g. science fiction or jazz”, column 15, lines “40 - 41”), compare the desired attribute value specified in the user request with the attribute value for the potential alternative product “the

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item-to-item mappings could also incorporate other types of similarities, including content-based similarities extracted by analyzing item descriptions or contents”, (column 3, lines 4 - 6) to determine an attribute similarity value for the product attribute for the selected potential alternative product “each similar items list consists of the N items which, based on correlations between purchases of items, are deemed to be the most closely related to the respective popular item. Each item in the similar items list is stored together with a commonality index value, which indicates the relatedness of that item to the popular item”, (column 9, lines 34 - 40).

determine a product similarity value for the potential alternative product according to the attribute similarity values, each attribute similarity value having been determined for a selected product attribute for which a desired attribute value is specified in the user request by comparing the desired attribute value specified in the user request by comparing the desired attribute value specified in the user request with the attribute value for the potential alternative product (“the commonality index values are measures of the similarity between two items, with large CI values indicating greater degrees of similarity. The commonality indexes are preferably generated such that, for a given popular-item, the respective commonality indexes of the corresponding other_items take into consideration both the number of customers that are common to both items, and the total number of customers of the other_item”, column 12, line 66 – column 13, line 4).

the set of one or more candidate's alternative products being selected according to the product similarity values for the potential alternative products, each product similarity value having been determined according to the attribute similarity values determined for each

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selected product attribute for which a desired attribute value is specified in the user request; A set of alternative products is anticipated by Linden et al., which teaches “For each item of known interest, the service retrieves the corresponding similar items list 64 from the similar items table” (column 10, lines 65 - 67).

a sort procedure operable to rank the one or more candidate alternative products in order of decreasing similarity to the requested product determined according to the product similarity values for the one or more candidate alternative products, each product similarity value having been determined according to the attribute similarity values determined for each selected product attribute for which a desired attribute value is specified in the user request; Sorting or ranking products based on similarity attribute scores is anticipated by Linden et al., which teaches “combining the sets of similar products identified into a ranked set in which rankings are based at least in-part on the similarity scores” (column 20, lines 7 - 10).

Linden et al does not specifically teach incorporation of a user interface to allow the user to enter attributes to be searched on. It would be obvious to do this in order to allow the user to perform searches that incorporate that user’s specific attributes.

Breese et al teaches an automated collaborative filter based device that also matches entities and attributes (“a process for matching entities in accordance with the present invention, a match of entities based on a union of all attributes for which either entity has a value”, column 6, lines 47 - 50) to predict and suggest similar products based on the frequency of which attributes occur (“the inverse attribute frequency aspect of the present invention discounts more common entity attributes and emphasizes more rare entity attributes when matching entities”, column 7, lines 40 - 43). Breese further teaches the use of a user interface operable to present

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the set of one or more candidate alternative products to the user for selection of a candidate alternative product (column 10, lines 1 – 7, “the improved collaborative filter or entity match determination engine may communicate with a user e.g. the input devices and output devices. In this way, the improved collaborative filter or entity match determination engine may, for example, accept entity attributes and provide suggestions”), where the attributes include (column 4, lines 5 – 6, “age, sex, weight, favorite food, television shows viewed, money spent on movie rentals, etc”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Linden et al attribute matching device with the Breese et al attribute matching device, both of which employ a content based collaborative filter, because this would allow a user of the Linden device to enter their own specified attributes in order to perform the matching and recommendation of items based on common attributes. Allowing an individual user to enter either their own or another person’s attributes would be an essential element in constructing a data set for use by the matching system. Without the ability to update data elements via a user interface, the device would merely generate results based on a non-changing, stagnant data set, with no ability to stay current and incorporate new attributes, preferences or items to be recommended. Incorporating new data entered by a user above and beyond the initial data entered would extend the service life of the Linden invention and make it a more cost effective tool for use in marketing.

8. As per **Claim 2**, Linden et al teaches an interface wherein the first and second user interfaces are combined to function as a single user interface. The first user interface is anticipated by Linden et al which teaches in FIG. 6, wherein “the user can also select a specific

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category such as “non-fiction” or “romance” from a drop-down menu 202 to request category-specific recommendations” (column 15, lines 63 – 64) and by the “Refine your recommendations” functionality in FIG. 6. The second user interface is also anticipated by Linden et al., which teaches “The general form of such a Web page is shown in FIG. 6, which lists five recommended items” (column 15, lines 53 - 54).

9. As per **Claim 3**, Linden et al teaches the system of Claim 1, further comprising:

a database coupled to the search procedure, the database containing information identifying available products, the availability of such products, and the product attributes of such products, the search procedure operable to access the information in the database and, based on the accessed information, to exclude from the set of one or more candidate alternative products all potential alternative products for which no excess supply is available. Database storage of product information or attributes, such as title, recommendation status and cover type, is anticipated by Linden et al., which teaches “The Web server accesses a database of HTML (Hypertext Markup Language) content which includes product information pages and other browsable information about the various products of the catalog. The items that are the subject of the Recommendation Service are the titles (regardless of media format such as hardcover or paperback) that are represented within this database” (column 7, lines 13 - 18). Availability of the product is anticipated by Linden et al., which teaches “The system as in claim 16, wherein the items are products that are available for online purchase” (column 19, lines 55 - 56).

10. As per **Claims 4, 20 and 35**, Linden et al teaches the system, method and software wherein the second user interface, when the user selects a candidate alternative product, is

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operable to cause the information in the database identifying the availability of the selected candidate alternative product to be updated. An interface that allows a user to choose an alternative product and display information is anticipated by Linden et al., which teaches "From this page, the user can select a link associated with one of the recommended items to view the product information page for that item." (column 15, lines 54 - 56). Availability of the product is anticipated by Linden et al., which teaches "The system as in claim 16, wherein the items are products that are available for online purchase" (column 19, lines 55 - 56).

11. As per **Claims 7, 11, 21, 25, 36 and 40**, Linden et al teaches the system, method and software wherein the desired attribute value for a selected product attribute comprises a maximum, minimum, or exact attribute value for the selected product attribute. A maximum and a minimum attribute value is anticipated by Linden et al., which teaches "the resulting list is then sorted in order of highest-to-lowest" (column 11, lines 25 - 27), where the first value on the list is the highest or maximum value and the last item on the list is the lowest or minimum value.

12. As per **Claims 8, 22 and 37**, Linden et al teaches the system, method and software wherein the user request further specifies one or more of a maximum attribute value and a minimum attribute value for each selected product attribute; A maximum and a minimum attribute value is anticipated by Linden et al., which teaches "the resulting list is then sorted in order of highest-to-lowest" (column 11, lines 25 - 27), where the first value on the list is the highest or maximum value and the last item on the list is the lowest or minimum value.

the search procedure is operable to exclude from the set of one or more candidate alternative products all potential alternative products having attribute values that do not satisfy

one or more of the maximum attribute value and the minimum attribute value for a corresponding selected product attribute. The exclusion or filtering is anticipated by Linden et al., which teaches “the sorted list is filtered to remove unwanted items” (column 11, lines 26 - 27).

13. As per **Claims 9, 23 and 38**, Linden et al teaches the system, method and software wherein the user request further specifies a desired level of similarity for each of one or more product characteristics, each product characteristic encompassing one or more selected product attributes. A maximum and a minimum attribute value is anticipated by Linden et al., which teaches “the resulting list is then sorted in order of highest-to-lowest” (column 11, lines 25 - 27), where the first value on the list is the highest or maximum value and the last item on the list is the lowest or minimum value.

14. As per **Claims 10, 24 and 39**, Linden et al teaches the system, method and software wherein the specified desired level of similarity for a product characteristic acts as a constraint on the attribute values a potential alternate product may have to become a candidate alternative product. Product characteristics that can act as constraints on selecting a similar product is anticipated by Linden et al., which teaches “the list is filtered by deleting any items that (1) have already been purchased or rated by the user, (2) have a negative score, or (3) do not fall within the designated product group (e.g., books) or category (e.g., "science fiction," or "jazz")” (column 15, lines 37 - 41).

15. As per **Claims 13, 27 and 42**, Linden et al teaches the system, method and software wherein if a selected product attribute is a binary attribute, then the attribute similarity value for

a potential alternative product is zero if the attribute value for the potential alternative product is not the same as the desired attribute value for the requested product and is one if the attribute value for the potential alternative product is the same as the desired attribute value for the requested product. A binary attribute search process is anticipated by Linden et al., which teaches “is_purchased is a Boolean variable which indicates whether a popular item was purchased” (column 14, lines 50 - 52).

16. As per **Claims 14, 28 and 43**, Linden et al teaches the system, method and software wherein:

the user request further specifies an attribute weight for each selected product attribute; Weighting of attributes or interests is anticipated by Linden et al., which teaches “the similar items lists read from the table are appropriately weighted (prior to being combined) based on indicia of the user's affinity for or current interest in the corresponding items of known interest” (column 6, lines 15 - 18).

the search procedure is operable to determine a weighted sum of the attribute similarity values for the selected product attributes for the potential alternative product according to the attribute weights for the selected product attributes; A sum of weighted attributes is anticipated by Linden et al., which teaches “if the weight value for a given popular item is ten, and the similar items list 64 for the popular item is

(productid_A, 0.10), (productid_B, 0.09), (productid_C, 0.08),

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the weighted similar items list would be:

(productid_A, 1.0), (productid_BB, 0.9), (productid_C, 0.8)” (column 15, lines 19 - 25).

17. As per **Claims 15, 29 and 44**, Linden et al teaches the system, method and software wherein the product similarity value for a potential alternative product comprises a global index value for the potential alternative product with respect to the requested product. A global or common index value for evaluating the similarity between alternative and requested products is anticipated by Linden et al., which teaches “the commonality index (CI) values are measures of the similarity between two items, with larger CI values indicating greater degrees of similarity” (column 12, lines 63 - 65).

18. As per **Claims 16, 30 and 45**, Linden et al teaches are the system, method and software wherein:

the user request further specifies a threshold product similarity value and the search procedure is operable to compare the product similarity value for each potential alternative product with the threshold product similarity value and to exclude from the set of one or more candidate alternative products each potential alternative product having a product similarity value that does not satisfy the threshold product similarity value. A threshold level of values to filter attribute similarities against is anticipated by Linden et al., which teaches “the shopping cart recommendations service is preferably invoked automatically when the user displays the contents of a shopping cart that contains more than a threshold number (e.g., 1) of popular items” (column 16, lines 8 – 9) and “the service becomes available to the user (i.e., the appropriate

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hyperlink is presented to the user) once the user has purchased and/or rated a threshold number (e.g. three) of popular items within the corresponding product group" (column 14, lines 27 - 30).

19. As per **Claims 17, 31 and 46**, Linden et al teaches the system, method and software wherein the sort procedure is operable to limit the ranked candidate alternative products to a user-specified number. Limiting the number of ranked items to a user specified number is anticipated by Linden et al., which teaches "the sorted other items lists are filtered by deleting all list entries that have fewer than 3 customers in common" (column 13, lines 48 - 49).

20. As per **Claims 18, 32 and 47**, Linden et al teaches the system, method and software wherein:

the user request further specifies an attribute weight for each selected product attribute; Weighting of attributes is anticipated by Linden et al., which teaches "the similar items lists read from the table are appropriately weighted (prior to being combined) based on indicia of the user's affinity for or current interest in the corresponding items of known interest" (column 6, lines 14 - 18).

the sort procedure is operable to if two candidate alternative products are tied in that they have the same product similarity values, ranking the two candidate alternative products in order of decreasing attribute similarity value for the selected product attribute having the highest attribute weight, and if the two candidate alternative products are still tied in that they have the same attribute similarity value for the selected product attribute having the highest attribute weight, ranking the two candidate alternative products in order of decreasing attribute similarity

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value for the selected product attribute having the second highest attribute weight and to if necessary to break the tie, continuing with respect to one or more successive selected product attributes having lower attribute weights until the tie is broken. Using weights is anticipated by Linden et al., which teaches “if the weight value for a given popular item is ten, and the similar items list 64 for the popular item is:

(productid_A, 0.10), (productid_B, 0.09), (productid_C, 0.08),

the weighted similar items list would be:

(productid_A, 1.0), (productid_BB, 0.9), (productid_C, 0.8),

The numerical values in the weighted similar items lists are referred to as ‘scores’” (column 15, lines 17 - 27). Sorting these items is also anticipated by Linden et al., which teaches “the resulting list is sorted from highest-to-lowest score. The effect of the sorting operation is to place the most relevant items at the top of the list” (column 15, lines 34 - 37).

21. As per **Claims 19 and 34**, Linden et al teaches the system, method and software comprising:

accessing information identifying available products, the availability of such products, and the product attributes of such products and, based on the accessed information, excluding from the set of one or more candidate alternative products all potential alternative products for which no excess supply is available. Using a filter to exclude items based on alternate attributes such as the item already has been purchased, is anticipated by Linden et al., which teaches “the list is filtered by deleting any items that (1) have already been purchased or rated by the user, (2) have a negative score, or (3) do not fall within the designated product group” (column 11, lines 26 - 30).

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22. As per **Claim 48**, Linden et al teaches an automated collaborative filter based system for offering to a user one or more alternative products similar to a requested product, comprising:

a user interface operable to receive a user request for a product having one or more product attributes, with which the user requests and selects and reads about products within the system. An interface where a user can enter and read data is anticipated by Linden et al., which teaches a shopping cart as “a shopping cart is a data structure and associated code which keeps track of items that have been selected by a user for possible purchase” (column 4, line 66 – column 5, line 1).

an attribute value and weight for each selected product attribute; Attribute weights are anticipated by Linden et al., which teaches “TABLE 2 1 Weight = ((is_purchased ? 5:rating) * 2 - 5) * 2 (1 + (max((is purchased ? order_date:0)-(now-6 months), 0)) 3 / (6 months))” (column 14, lines 58 - 63).

threshold product similarity value; A similarity threshold is anticipated by Linden et al., which teaches “the service becomes available to the user (i.e., the appropriate hyperlink is presented to the user) once the user has purchased and/or rated a threshold number (e.g. three) of popular items within the corresponding product group” (column 14, lines 27 - 30).

a search procedure operable to select a set of one or more candidate alternative products having attribute values consistent with the desired attribute values specified in the user request for the selected product attributes, for each potential alternative product in a set of potential alternative products the search procedure operable to each selected product attribute, compare the desired attribute value with the attribute value for the potential alternative product to determine an attribute similarity index value for the product attribute for the potential alternative

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product; A similarity index is anticipated by Linden et al., which teaches “teaches “the commonality index (CI) values are measures of the similarity between two items, with larger CI values indicating greater degrees of similarity” (column 12, lines 63 - 65).

determine a weighted sum of the attribute similarity index values for the selected product attributes for the potential alternative product according to the attribute weights for the selected product attributes; A weighted sum is anticipated by Linden et al., which teaches “if the weight value for a given popular item is ten, and the similar items list 64 for the popular item is

(productid_A, 0.10), (productid_B, 0.09), (productid_C, 0.08),

the weighted similar items list would be:

(productid_A, 1.0), (productid_BB, 0.9), (productid_C, 0.8),

The numerical values in the weighted similar items lists are referred to as ‘scores’” (column 15, lines 18 - 27).

determine a product similarity index value for the potential alternative product according to the weighted sum of the attribute similarity index values, each attribute similarity value having been determined for a selected product attribute for which a desired attribute value is specified in the user request by comparing the desired attribute value specified in the user request by comparing the desired attribute value specified in the user request with the attribute value for the potential alternative product; A similarity index is anticipated by Linden et al., which teaches “the commonality index (CI) values are measures of the similarity between two items, with larger CI values indicating greater degrees of similarity” (column 12, lines 62 - 65).

compare the product similarity index value for the potential alternative product with the threshold product similarity value and to include the potential alternative product in the set of one or more candidate alternative products if the potential alternative product has a product similarity index value that satisfies the threshold product similarity value, each product similarity index value having been determined according to the weighted sum of the attribute similarity index values determined for each selected product attribute for which a desired attribute value is specified in the user request; Another measure of similarity, that the same people purchased both items, is anticipated by Linden et al., which teaches “item_P (a popular item) has two "other items," item_X and item_Y. Item_P has been purchased by 300 customers, item_X by 300 customers, and item_Y by 30,000 customers. In addition, item_P and item_X have 20 customers in common, and item_P and item_Y have 25 customers in common. Applying the equation above to the values shown in FIG. 4 produces the following results:

$$CI(\text{item_P}, \text{item_X}) = 20 / \sqrt{300 \cdot 300} = 0.0667$$

$$CI(\text{item_P}, \text{item_Y}) = 25 / \sqrt{300 \cdot 30,000} = 0.0083” \text{ (column 13, lines 15 - 23).}$$

a sort procedure operable to rank the one or more candidate alternative products in order of decreasing similarity to the requested product determined according to the product similarity index values for the one or more candidate alternative products; A maximum and a minimum attribute value is anticipated by Linden et al., which teaches “the resulting list is then sorted in order of highest-to-lowest” (column 11, lines 25 - 27), where the first value on the list is the highest or maximum value and the last item on the list is the lowest or minimum value.

the user interface operable to present the set of one or more candidate alternative products to the user for selection of a candidate alternative product. A user interface with which the user

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selects and reads about products within the system is anticipated by Linden et al., which teaches a shopping cart as “a shopping cart is a data structure and associated code which keeps track of items that have been selected by a user for possible purchase” (column 4, line 66 – column 5, line 1).

Linden et al does not specifically teach incorporation of a user interface to allow the user to enter attributes to be searched on. It would be obvious to do this in order to allow the user to perform searches that incorporate that user’s specific attributes.

Breese et al teaches an automated collaborative filter based device that also matches entities and attributes to predict and suggest similar products based on the frequency of which attributes occur. Breese further teaches the use of a user interface operable to present the set of one or more candidate alternative products to the user for selection of a candidate alternative product (column 10, lines 1 – 7, “the improved collaborative filter or entity match determination engine may communicate with a user e.g. the input devices and output devices. In this way, the improved collaborative filter or entity match determination engine may, for example, accept entity attributes and provide suggestions”), where the attributes include (column 4, lines 5 – 6, “age, sex, weight, favorite food, television shows viewed, money spent on movie rentals, etc”).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the Linden et al attribute matching device with the Breese et al attribute matching device, both of which employ a content based collaborative filter, because this would allow a user of the Linden device to enter their own specified attributes in order to perform the matching and recommendation of items based on common attributes. Allowing

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an individual user to enter either their own or another person's attributes would be an essential element in constructing a data set for use by the matching system. Without the ability to update data elements via a user interface, the device would merely generate results based on a non-changing, stagnant data set, with no ability to stay current and incorporate new attributes, preferences or items to be recommended. Incorporating new data entered by a user above and beyond the initial data entered would extend the service life of the Linden invention and make it a more cost effective tool for use in marketing.

Response to Amendments

24. Applicant's arguments filed December 12, 2003 have been fully considered, but the same are not persuasive.

Applicant argues that Linden fails to teach a user request specifying the desired attribute. However, Breese does in fact teach user defined attributes entered through an input interface (column 10, lines 1 – 7, “the improved collaborative filter or entity match determination engine may communicate with a user e.g. the input devices and output devices. In this way, the improved collaborative filter or entity match determination engine may, for example, accept entity attributes and provide suggestions”).

Applicant argues that Linden fails to teach a search procedure that uses the user-defined attributes. However, Breese does teach a search procedure (column 1, lines 45 - 47, “in response to a user's query, a rank ordered list, which includes brief descriptions of the uncovered content”) and use of user-defined attributes (column 10, lines 1 – 7, “the improved collaborative filter or entity match determination engine may communicate with a user e.g. the input devices and output devices. In this way, the improved collaborative filter or entity match determination engine may, for example, accept entity attributes and provide suggestions”).

Applicant argues that Linden fails to teach comparing attributes and product similarities specified in a user request with other comparable product attributes in order to find alternative products. However, Breese does teach user specified attributes (column 10, lines 1 – 4, “the improved collaborative filter or entity match determination engine may communicate with a user e.g. the input devices and output devices”) and also teaches matching (column 10, lines

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5 – 7, “In this way, the improved collaborative filter or entity match determination engine may, for example, accept entity attributes and provide suggestions”).

Applicant argues that Linden fails to teach a sort procedure to rank the one or more candidate alternative products based on the user defined attributes. However Breese does teach sorting and ranking (column 1, lines 45 - 47, “in response to a user’s query, a rank ordered list, which includes brief descriptions of the uncovered content”) and use of user-defined attributes (column 10, lines 1 – 7, “the improved collaborative filter or entity match determination engine may communicate with a user e.g. the input devices and output devices. In this way, the improved collaborative filter or entity match determination engine may, for example, accept entity attributes and provide suggestions”).

In light of the above stated facts, examiner respectfully states that applicant’s arguments have been fully considered, deemed unpersuasive, and the rejections under the prior Office Action, mailed April 13, 2003 are maintained.

Art Unit: 3623

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lang et al (US 5,867,799) – User classification and filtering system.
Robinson (US 5,884,282) – Automated collaborative filtering system.
Robinson (US ,918,014) – World wide web advertising system.

26. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Shaffer whose telephone number is (703) 305-5283. The Examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

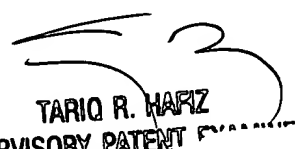
Commissioner of Patents and Trademarks
Washington D.C. 20231

Or faxed to:

(703)746-7238	[After Final communications, labeled "Box AF"]
(703) 746-7239	[Official communications]
(703) 706-9124	[Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2121 Crystal Drive, Arlington, VA, 7th floor receptionist.

ETS
February 3, 2004


TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY